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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,941	10/30/2003	Klaus-Dieter Hammer	22135-00017-US	6279

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EXAMINER

O HERN, BRENT T

ART UNIT	PAPER NUMBER
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1772

MAIL DATE	DELIVERY MODE
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09/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/695,941

Applicant(s)

HAMMER ET AL.

Examiner

Brent T. O'Hern

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-9, 11-13 and 15-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-9, 11-13 and 15-19 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1772

DETAILED ACTION

Claims

1. Claims 1-4, 6-9, 11-13 and 15-19 are pending.

WITHDRAWN OBJECTIONS

2. The objections to claims 13 and 17 in the Office Action mailed 8 May 2007, page 3, paragraph 9 have been withdrawn due to Applicant's amendments in the Paper filed 23 July 2007.

WITHDRAWN REJECTIONS

3. The 35 U.S.C. 103(a) rejections of claims 1-4, 6-12, 15, and 17-19 as being obvious over Hammer et al. (US 5,501,886) in view of Borodaev et al. (WO 02/078455) of record in the Office Action mailed 8 May 2007, page 3, paragraph 10 have been withdrawn due to Applicant's amendments in the Paper filed 23 July 2007.
4. The 35 U.S.C. 103(a) rejections of claims 13 and 16 as being obvious over Hammer et al. (US 5,501,886) in view of Borodaev et al. (WO 02/078455) and Crevasse (US 5,215,495) of record in the Office Action mailed 8 May 2007, page 6, paragraph 11 have been withdrawn due to Applicant's amendments in the Paper filed 23 July 2007.

NEW OBJECTIONS

Claim Objections

5. Claim 11 is objected to because of the following informalities: Claim 11 is dependent on cancelled claim #10. The Examiner has interpreted claim #11 as depending on claim #8, the claim that cancelled claim #10 was dependent on.

Appropriate correction is required.

NEW REJECTIONS***Claim Rejections - 35 USC § 103***

6. Claims 1-4, 6-12, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hammer et al. (US 5,501,886) in view of Borodaev et al. (WO 02/078455) with evidence by Hammer et al. (US 4,529,634).

Regarding claim 1, Hammer ('886) teaches a seamless tubular food casing comprising at least one copolymer comprising units of vinylpyrrolidone and units of at least one comonomer (*See Abs., ll. 1-6 and col. 4, l. 22 to col. 6, l. 2, specifically vinylpyrrolidone as illustrate in Formula-I and at least one comonomer.*), and an admixture of cellulose hydrate (*See col. 6, ll. 29-51.*) carboxyl group-containing compounds (*See col. 5, ll. 23-55, specifically ll. 51-55, hydrophilic "unsaturated carboxyl acids" and the other carboxyl groups within the greater passage exhibiting the unsaturated carboxylic acid and/or α , β -ethylenically unsaturated carboxylic acid functionality. Furthermore, the examiner interprets Hammer's ('886) express disclosure of "unsaturated carboxyl acids" to actually mean to include "unsaturated carboxyl acids" which encompass α , β -ethylenically unsaturated carboxylic acid's such as acrylic and methacrylic acids since Applicant, discloses the same α , β -ethylenically unsaturated carboxylic acid's in a patent application filed over ten years prior to the filing of Hammer's ('886) (*See col. 4, ll. 4-29 of Hammer et al. (US 4,529,634)*), however, fails to expressly disclose a comonomer being selected from the group consisting of vinyl alkanoate, vinyl alkyl ether, conjugated alkadiene, acrylamide and α , β -ethylenically unsaturated carboxylic acid.*

Art Unit: 1772

However, Borodaev ('455) teaches wherein the casing comprises a copolymer with units of vinylpyrrolidone and α , β -ethylenically unsaturated carboxylic acid (See p. 4, ll. 21-25 wherein acrylic acid and methacrylic acid are α , β -ethylenically unsaturated carboxylic acids.) for the purpose of providing a film with good hydrophilic and mechanical properties (See p. 4, ll. 6-8.). Furthermore, acrylic acid and methacrylic acid clearly provide for improved hydrophilic properties, as opposed to esters, due to their hydrophilic carboxylic acid structure.

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to substitute Hammer's ('886) unsaturated carboxylic group containing compounds, including those that Hammer ('886) expressly describes as "unsaturated carboxylic acids" with the α , β -ethylenically unsaturated carboxylic acid as taught by Borodaev ('455) in order to provide a film with good hydrophilic and mechanical properties.

Regarding claims 2-4, Hammer ('886) teaches a casing wherein the weight ratio of the copolymer to cellulose is from 1:25 to 10:1, which equates to 10-96% for claim #2/(1:5 to 5:1, which equates to 17-83% for claim #3)/(1:4 to 4:1, which equates to 20-80% for claim #4) (See col. 6, ll. 37-51 wherein Hammer's ('886) from 0.1 to 100% as specifically stated in l. 46 clearly falls within all of the above claimed proportions, with corresponding percentage equivalents.).

Regarding claims 6-7, Hammer ('886) teaches a casing wherein the proportion of comonomer units is less than 50 mol %/(30 mol %) based on the sum of all monomer and comonomer units in the copolymer (See col. 6, ll. 29-51 and ll. 8-10, specifically l.

Art Unit: 1772

46 wherein the weight % is as low as 0.1% for a mean molecular weight from 500,000-1,500,000 is clearly less than 30%/50%).

Regarding claim 8, Hammer ('886) teaches a casing comprising a fiber reinforcement (*col. 5, l. 12*).

Regarding claim 9, Hammer ('886) teaches a casing wherein the fiber reinforcement comprises a hemp fiber paper (*col. 10, l. 66*).

Regarding claim 11, Hammer ('886) teaches a casing wherein the copolymer is a mixture with the cellulose hydrate comprises a layer on the outside of the fiber reinforcement (*See col. 10, l. 66 to col. 11, l. 16 wherein the hemp is coated with the cellulose hydrate and col. 4, ll. 23-67 and col. 2, ll. 51-64 wherein the cellulose hydrate is disclosed.*).

Regarding claim 12, Hammer ('886) teaches a casing wherein the copolymer is present in an amount sufficient to inhibit or suppress mold growth (*See col. 6, ll. 29-51 wherein the amount of copolymer can be varied and a person having ordinary skill in the art would know that said varied amount is sufficient to suppress mold growth. Furthermore, the Examiner interprets any amounts of copolymer to be sufficient.*).

Regarding claim 15, Hammer ('886) teaches an artificial sausage comprising a food casing (*col. 1, l. 9*).

Regarding claim 17, Hammer ('886) teaches a shirred stick (*col. 10, ll. 57-60*).

7. Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hammer et al. (US 5,501,886) in view of Borodaev et al. (WO 02/078455) and Crevasse (US 5,215,495) with evidence by Hammer et al. (US 4,529,634).

Art Unit: 1772

Regarding claim 13, Hammer ('886) and Borodaev ('455) teach the casing discussed above and Hammer ('886) teaches wherein the casing is shirred to form a shirred stick (*col. 10, l. 56*), however, fail to expressly disclose a length from 5 to 100 m.

However, Crevasse ('495) teaches a length from 5 to 100 m (*See col. 3, ll. 56-59.*) for the purpose of encasing a large number of sausages (*See col. 3, ll. 58-59.*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to modify Hammer's ('886) casing with a shirred stick from 5 to 100 m as taught by Crevasse ('495) in order to provide encasing for a large number of sausages.

Regarding claim 16, Hammer ('886) teaches a sausage comprising a food casing (*See Abstract.*).

8. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hammer et al. (US 5,501,886).

Regarding claim 18, Hammer ('886) teaches a food casing comprising cellulose and an additive (*See col. 7, ll. 15-27 and col. 8, ll. 15-38*), however, fails to expressly disclose wherein the presence of the additive is in amount sufficient to achieve, as compared to a food casing comprising cellulose without the additive: (i) lower permeation while water vapor permeability is preserved.

However, it would have been obvious to a person having ordinary skill in the art at the time Applicant's invention was made that the cellulose, the additive and the processing parameters can be varied to provide lower permeation depending on the requirements of use (*See col. 7, ll. 15-27 and col. 8, ll. 15-38.*). Furthermore, the phrase

Art Unit: 1772

"permeability is preserved" is interpreted as providing for the existence of or non existence of any amount of permeability.

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to vary the above parameters in order to provide for the above permeation.

Regarding claim 19, Hammer ('886) teaches a casing wherein the additive comprises a polyvinylpyrrolidone (*See Abs., ll. 1-6 and col. 4, ll. 23-37.*).

9. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hammer et al. (US 5,501,886) in view of Hammer et al. (US 4,529,634).

Regarding claim 1, Hammer ('886) teaches a seamless tubular food casing comprising at least one copolymer comprising units of vinylpyrrolidone and units of at least one comonomer (*See Abs., ll. 1-6 and col. 4, l. 22 to col. 6, l. 2, specifically vinylpyrrolidone as illustrate in Formula-I and at least one comonomer.*), and an admixture of cellulose hydrate (*col. 6, ll. 29-51*) carboxyl group-containing compounds (*See col. 5, ll. 23-55, specifically ll. 51-55, hydrophilic "unsaturated carboxyl acids" and the other carboxyl groups within the greater passage exhibiting the unsaturated carboxylic acid and/or α , β -ethylenically unsaturated carboxylic acid functionality.* Furthermore, the examiner interprets Hammer's ('886) express disclosure of "unsaturated carboxyl acids" to actually mean to include "unsaturated carboxylic acids" which encompass α , β -ethylenically unsaturated carboxylic acid's such as acrylic and methacrylic acids since Applicant, disclosed the same α , β -ethylenically unsaturated carboxylic acid's in a patent application filed over ten years prior to the filing of Hammer ('886) (*See col. 4, ll. 4-29 of Hammer et al. (US 4,529,634).*)), however, fails to

Art Unit: 1772

expressly disclose a comonomer being selected from the group consisting of vinyl alkanoate, vinyl alkyl ether, conjugated alkadiene, acrylamide and α , β -ethylenically unsaturated carboxylic acid.

However, Hammer ('634) teaches wherein the casing comprises a copolymer with units of α , β -ethylenically unsaturated carboxylic acid (*See col. 4, ll. 4-29, acrylic and methacrylic acids, which are α , β -ethylenically unsaturated carboxylic acid's.*) for the purpose of providing a film with good hydrophilic and mechanical properties while inhibiting mold (*See col. 4, ll. 4-29 and col. 3, ll. 29-43.*). Furthermore, acrylic acid and methacrylic acid clearly provide for improved hydrophilic properties, as opposed to esters, due to their carboxylic acid structure.

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to substitute Hammer's ('886) unsaturated carboxylic group containing compounds, including those that Hammer ('886) expressly describes as "unsaturated carboxylic acids" with the α , β -ethylenically unsaturated carboxylic acid as taught by Borodaev ('455) in order to provide a film with good hydrophilic and mechanical properties.

10. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hammer et al. (US 4,529,634).

Hammer ('634) teaches a food casing comprising cellulose and an additive (*See col. 3, ll. 29-43 and col. 6, ll. 1-13.*), however, fails to expressly disclose wherein the presence of the additive is in amount sufficient to achieve, as compared to a food casing comprising cellulose without the additive: (ii) reduced susceptibility to cellulase and increased resistance to mold.

Art Unit: 1772

However, it would have been obvious to a person having ordinary skill in the art at the time Applicant's invention was made that the cellulose, the additive and the processing parameters can be varied to provide reduced susceptibility to cellulase and increased resistance to mold depending on the requirements of use (*See col. 3, ll. 29-43 and col. 6, ll. 1-13.*).

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to vary the above parameters in order to provide for the above properties.

ANSWERS TO APPLICANT'S ARGUMENTS

11. In response to Applicant's argument (*p. 6, para. 2 of Applicant's Paper filed 23 July 2007*) that Hammer et al. (US 5,501,886) does not disclose α , β -ethylenically unsaturated carboxylic acids, it is noted that the Examiner concurs that Hammer et al. (US 5,501,886) does not expressly disclose α , β -ethylenically unsaturated carboxylic acids, however, it is noted that Hammer et al. (US 5,501,886) does disclose unsaturated carboxylic acids (*See col. 5, ll. 53-54.*). Furthermore, *Hammer et al. (US 4,529,634)* discloses more than ten years earlier acrylic and methacrylic acids, which are α , β -ethylenically unsaturated carboxylic acids (*See col. 4, ll. 4-29.*).

12. In response to Applicant's argument (*p. 6, para. 3 to p. 7, para. 1 of Applicant's Paper filed 23 July 2007*) that Borodaev ('455) does not disclose vinyl pyrrolidone and α , β -ethylenically unsaturated carboxylic acids, it is noted that Borodaev ('455) clearly teaches "copolymers of vinylpyrrolidone ... acrylic acid, and methacrylic acids (sic)", wherein acrylic and methacrylic acids are clearly α , β -ethylenically unsaturated carboxylic acids. Furthermore, it is noted that Applicant appears to admit that

Art Unit: 1772

Applicant's disclosure is at least in part non-enabling as Applicant's argument appears to contradict paragraph #13 of Applicant's Specification.

13. In response to Applicant's argument (*p. 7, para. 2 of Applicant's Paper filed 23 July 2007*) that Hammer et al. (US 5,501,886) does not teach claims 2-4 and 6-7, it is noted that Applicant has not precisely presented any additional arguments than already discussed above.

14. In response to Applicant's argument (*p. 7, para. 3 of Applicant's Paper filed 23 July 2007*) that Hammer et al. (US 5,501,886) does not teach the water vapor permeability of claims 18-19, it is noted, as discussed above, that the phrase "permeability is preserved" is interpreted as providing for the existence of or non existence of any amount of permeability, which Hammer (US 5,501,886) clearly teaches.

15. In response to Applicant's argumentS (*p. 8, paras. 1-2 of Applicant's Paper filed 23 July 2007*) that the references do not teach claims 13 and 16, it is noted that Applicant has not precisely presented any additional arguments than already discussed above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent T. O'Hern whose telephone number is (571) 272-0496. The examiner can normally be reached on M-Th, 9:00-6:00.

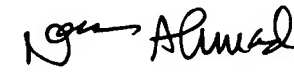
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1772

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Brent T O'Hern
Examiner
Art Unit 1772
August 29, 2007


NASSER AHMAD
PRIMARY EXAMINER
8/30/07